

<b>FORM PTO-1449</b> <b>INFORMATION DISCLOSURE STATEMENT</b>	<b>SERIAL NO.</b>	10/595/935
	<b>FILING DATE</b>	August 9, 2006
	<b>APPLICANT</b>	Mercep et al.
	<b>GROUP</b>	4161
	<b>EXAMINER</b>	P.E. Zarek
<b>ATTORNEY DOCKET NO.</b>		PLP528USw

### U.S. PATENT DOCUMENTS

Examiner Initials		Patent Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
/PEZ/	1	3,773,940	Nov. 20, 1973	Schindler et al.			
	2	3,781,294	Dec. 25, 1973	Lombardino			
	3	3,859,439	Jan. 7, 1975	Blattner et al.			
	4	3,894,032	July 8, 1975	Remy			
	5	3,974,285	Aug. 10, 1976	Remy			
	6	4,044,143	Aug. 23, 1977	Remy			
	7	4,112,110	Sept. 15, 1978	Blattner			
	8	4,267,184	May 12, 1981	Cherkofsky et al.			
	9	4,267,190	May 12, 1981	Cherkofsky et al.			
	10	4,271,179	June 2, 1981	van der Burg			
	11	5,917,057	June 29, 1999	Hamer et al.			
	12	6,897,211	May 24, 2005	Mercep et al			
	13	7,262,309	Aug. 28, 2007	Mercep et al			
	14	7,312,203	Dec. 25, 2007	Mercep et al			
	15	2003/0153750	Aug. 14, 2003	Mladen et al.			
	16	2005/0148578	July 7, 2005	Mercep et al.			

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### FOREIGN PATENT DOCUMENTS

		Document Number	Publication Date	Country	Class	Subclass	Translation Yes   No
/PEZ/	17	EP 0125484	Nov. 21, 1984	EUROPE			
	18	EP 0357126	Mar. 7, 1990	EUROPE			
	19	EP 0372445	June 13, 1990	EUROPE			
	20	WO 91/18885	Dec. 12, 1991	WIPO			
	21	WO 98/54186	Dec. 3 1998	WIPO			
	22	WO 99/00355	Jan. 7, 1999	WIPO			X Abstract
	23	WO 01/87890	Nov. 22, 2001	WIPO			
	24	WO 03/084961	Oct. 16, 2003	WIPO			
	25	WO 03/097648	Nov. 27, 2003	WIPO			
	26	WO 03/099823	Dec. 4, 2003	WIPO			
	27	HR 20000310	Feb. 28, 2002	CROATIA			X
	28	HR 20020453	May 23, 2002	CROATIA			X

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### OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)

/PEZ/	29	Ackermann L., Harvima I.T. "Mast cells of psoriatic and atopic dermatitis skin are positive for TNF- $\alpha$ and their degranulation is associated with expression of ICAM-1 in the epidermis." Arch. Dermatol. Res. 1998, 290:353-359.
	30	Aderka, D. "Role of tumor necrosis factor in the pathogenesis of intravascular coagulopathy of sepsis: potential new therapeutic implications." Isr. J. Med. Sci., 1991, 27:52-60.
	31	Arrieta O, et al. "Protective effect of pentoxifylline plus thalidomide against septic shock in mice." Int. J. Exp. Pathol. 1999, 80(1):11-16.
	32	Badger A.M. et al. "Beneficial effects of the phosphodiesterase inhibitors BRL 61063, pentoxifylline, and rolipram in a murine model of endotoxin shock." Circ. Shock 1994 44(4):188-195.
	33	Badger et al. "Pharmacological profile of SB 203580, a selective inhibitor of cytokine suppressive binding protein/p38 kinase, in animal models of arthritis, bone resorption, endotoxin shock and immune function." J. Pharmac. Env. Therap., 1996, 279(3):1453-1461.

/PEZ/	34	Bennett et al. "Reaction of 5-acetyl-10, didehydro-5H-dibenz[b,f] azepine with pyrrole, N-methylpyrrole, imadazole and n-methylimidazole: cycloaddition versus Michael addition." J. Heterocycl. Chem., 1994, 31:293-296.
	35	Bissonnette E. Y. et al. "Inhibition of tumour necrosis factor-alpha (TNF-alpha) release from mast cells by the anti-inflammatory drugs, sodium cromoglycate and nedocromil sodium." Clin. Exp. Immunol. 1995, 102:78-84.
	36	Bresnihan. "Treatment with recombinant human interleukin-1 receptor antagonist (rhIL-1ra) in rheumatoid arthritis (RA); results of randomized double-blind, placebo-controlled multicenter trial." Arthrit. Rheum., 1996, 39:73.
	37	Cagniant. C.R. Hebd. Sceances Acad. Sci., 1976, 283:683-686
	38	Carswell et al. "An endotoxin-induced serum factor that causes necrosis of tumors." Proc. Natl. Acad. Sci. U.S.A., 1975, 72:3666-3670.
	39	Chapman P.T. et al. "Endothelial activation in monosodium urate monohydrate crystal-induced inflammation: in vitro and in vivo studies on the roles of tumor necrosis factor alpha and interleukin-I." Arthritis Rheum., 1997, 40:955-965.
	40	Cheung A. T. et al. "An in vivo model for elucidation of the mechanism of tumor necrosis factor-alpha (TNF-alpha)-induced insulin resistance: evidence for differential regulation of insulin signaling by TNF-alpha." Endocrinology, 1998, 139:4928-4935.
	41	Collier et al. "The abdominal constriction response and its suppression by analgesic drugs in the mouse." Br. J. Pharmac. Chemother., 1968, 32:295-310
	42	Corral L., et al. "Differential Cytokine Modulation and T Cell Activation by Two Distinct Classes of Thalidomide Analogues That are Potent Inhibitors of TNF- $\alpha$ ." The Journal of Immunology 1999, 163:380-386.
	43	De Clerq, E. "Antiviral Drugs in Current Clinical Use." Journal of Clinical Virology, 2004, Vol. 30, pgs. 115-133.
	44	Dibbs Z, et al. "Cytokines in heart failure:pathogenetic mechanisms and potential treatment." Proc. Assoc. Am. Physicians, 1999, 111:423-428.
	45	Di Francia M. et al. "Tumor necrosis factor-alpha levels and weight loss in chronic obstructive pulmonary disease." AM. J. Respir. Crit. Care Med. 1994, 150:1453-1455.
	46	Dinarello. "An update on human interleukin-1: From molecular biology to clinical relevance." J. Clinical Immunology, 1985, 5:287.
	47	Dinarello. "Interleukin-1." Rev. Infect. Disease, 1984, 6(1):51-95.
	48	Duong D.J. et al. "American experience with lowdose thalidomide therapy for severe cutaneous lupus erythematosus." Arch. Dermatol. 1999 135 (9):1079-1087.
	49	Egido J. et al. "Role of tumor necrosis factor-alpha in the pathogenesis of glomerular diseases." Kidney Int. Suppl. 1993, 39:59-64.
	50	Elliott et al. "Randomised double-blind comparison of chimeric monoclonal antibody to tumor necrosis factor alpha (cA2) versus placebo in rheumatoid arthritis." The Lancet, 1994, 344:1105-1110.
	51	M. Feldman et al. "Role of Cytokines in Rheumatoid Arthritis." Annu. Rev. Immunol. 1996 14:397-440.
	52	Fukawa et al. "A method for evaluating analgesic agents in rats." J. Pharmacol. Meth., 1980, 4:251-259.
	53	Funke et al. "Physico-chemical properties and stability of trans-5-chloro-2-methyl-2,3,3a,12b-tetrahydro-1-dibenz[2,3:6,7]oxepino[4,5-c]pyrrolidine Maleate. Arzeim-Forsch., 1190, 40:536-539.
	54	Gauldie J. et al. "Cytokines and pulmonary fibrosis." Thorax, 1993, 48:931-935.
	55	Georgopoulos et al. "Transmembrane TNF is sufficient to induce localized tissue toxicity and chronic inflammatory arthritis in transgenic mice." J. Inflamm., 1996, 46:86-97.
	56	Gruschwitz, M., et al. "In situ Expression and Serum Levels of Tumor Necrosis Factor- $\alpha$ Receptors in Patients with Early Stages of Systemic Sclerosis." Journal Rheumatology 1997; 24:1936-43.
	57	Heilig, B. et al. "Elevated TNF Receptor Plasma Concentrations in Patients with Rheumatoid Arthritis." Clinical Investigation 1992; 70:22-27.
	58	Heilig B et al. "[Expression of TNF receptors in rheumatoid arthritis and ankylosing spondylitis]." [Article in German]. Z Rheumatol. 1993 Nov-Dec; 52(6):383-9.
	59	Hotamisligil G.S., Spiegelman B.M. "Tumor necrosis factor alpha: a key component of the obesity-diabetes link." Diabetes, 1994, 43:1271-1278.
	60	Huff, J.R. "HIV Protease: A novel chemotherapeutic target for AIDS." Journal of Medicinal Chemistry, 34(8), pgs. 2305-2314.
	61	Iyer and Gopalachari. "Studies in Potential Antifertility Agents: Part VII - Sythesis of Dialkylaminoethyl Derivatives of 2,4,5Triphenylpyrroles & 2,4,5Triphenylfurans." Indian J. Chem., 1973, 11:1260-1262.

/PEZ/	62	Jones et al. "Antiestrogens. 2. Structure-activity studies in a series of 3-aroyle-2-arylbenzo[b]thiophene derivatives leading to [6-hydroxy-2-(4-hydroxyphenyl)benzo[b]thien-3-yl][4-[2-(1-piperidinyloxy)-phenyl]methanone hydrochloride (LY156758), a remarkably effective estrogen antagonist with only minimal intrinsic estrogenicity." <i>J. Med. Chem.</i> , 1984, 27:1057-1066.
	63	Kapadia S. et al. "The role of cytokines in the failing human heart." <i>Cardiol. Clin.</i> , 1998, 16:645-656.
	64	Keffer, et al. "Transgenic mice expressing human tumour necrosis factor: a predictive genetic model of arthritis." <i>EMBO J.</i> , 1991, 10:4025-4031.
	65	King, F.D. "Bioisosteres, Conformational Restriction, and Pro-Drugs – Case History: An Example of a Conformational Restriction Approach." <i>Med. Chem.: Principle and Practice</i> (1994) p. 206-208.
	66	Kluth D.C., Rees A.J. "Inhibiting inflammatory cytokines." <i>Semin. Nephrol.</i> 1996, 16:576-582.
	67	Kopicova et al. "Potential Tetracyclic Neuroleptics: 12-(4-methylpiperazino)benzo[b]naphtho[2,3-f]theipin and its 12,13-dihydro Derivative." <i>Collect. Czech. Chem. Commun.</i> , 1975.40:1960-1965.
	68	Kopicova and Protiva. "Synthesis of 7-(4-methylpiperazino)-7,8-dihydrobenzo[b]naphtho[2,1-f]thiepin and of Related Compunds." <i>Collect. Czech. Chem. Commun.</i> , 1974. 39:3147-3152.
	69	Krakauer T, Stiles BG. "Pentoxifylline inhibits superantigen-induced toxic shock and cytokine release." <i>Clin Diagn Lab Immunol.</i> 1999 Jul.6(4):594-8.
	70	Liedtke W. "Effective Treatment of Models of Multiple Sclerosis by Matrix Metalloproteinase Inhibitors." <i>An. of Neurology</i> , 1998, Vol. 44; 35-46.
	71	Liu J.Y. et al. "TNF-alpha receptor knockout mice are protected from the fibroproliferative effects of inhaled asbestos fibers." <i>Am. J. Pathol.</i> , 1998, 153:1839-1847.
	72	Maini R.N, Taylor P.C. "Anti-Cytokine Therapy for Rheumatoid Arthritis." <i>Annu. Rev. Med.</i> 2000 51:207-229.
	73	Martel-Pelletier J., Alaaeddine N. Pelletier JP. "Cytokines and their role in the pathophysiology of osteoarthritis." <i>Front Biosci</i> , 1999 4:D694-703.
	74	Matsukawa A, et al. "Analysis of the Cytokine Network Among Tumor Necrosis Factor $\alpha$ , Interleukin-1 $\beta$ , Interleukin-8 and Interleukin-I Receptor Antagonist in Monosodium Urate Crystal-Induced Rabbit Arthritis." <i>Lab Invest</i> 1998; 78:559-569.
	75	Mattioli and Ghia. "Omega-dialkylaminoalkyl ethers of phenyl-(5-substituted 1-phenyl-1H-pyrazol-4-yl)methanols with analgesic and anti-inflammatory activity." <i>J. Heterocyclic Chem.</i> , 1997, 34:963-968.
	76	McHugh et al. "Preparation of 8H-Furo[3,4-d]dibenz[b,f]azepine. A Novel Heterocyclic Ring System." <i>J. Heterocycl. Chem.</i> , 1990, 27:1839-42.
	77	Mori et al. "Photochemical reactions of anthracene-naphthalene bichromophoric systems linked by a three-carbon chain." <i>J. Chem. Soc., Perkin Trans. 2</i> , 1996, 1:113-119.
	78	Mori et al. "Attenuation of collagen-induced arthritis in 55-kDa TNF receptor type 1 (TNFR1)-IgG1-treated and TNFR1-deficient mice." <i>J. Immunol.</i> , 1996, 157:3178-3182.
	79	Noguchi, M., et al. "Secretion Imbalance between Tumor Necrosis Factor and its inhibitor in inflammatory bowel disease." <i>Gut</i> 1998, 43:203-209.
	80	Novacek et al. "Reaction of 8-chloro-10-phenylhydrazono-10, 11-dihydro-dibenzo[b,f]thepine with aromatic aldehydes." <i>Collection Czechoslov. Chem. Commun.</i> , 1976, Vol. 41, 785-787.
	81	Nyiondi-Bonguen et al. "[4+2] - Cycloadditions of 3-Amino-4-imino-4H-thieno[3,4-c][1]benzopyran with some Selected Dienophiles." <i>J. Chem Soc., Perkin Trans. 1</i> , 1994, 15:2191-2195.
	82	Odeh M. "Role of Cytokines in Rheumatoid Arthritis." <i>Drugs News Perspect.</i> 11(6) 1998, 331-341.
	83	Oliver S., et al. "The Effect of Thalidomide and 2 Analogs on Collagen Induced Arthritis." <i>Journal of Rheumatology</i> 1998; 25:964-9.
	84	Olivera et al. "Dibenzoxepino '4,5-d pyrazoles: a facile approach via the Ullman-ether reaction." <i>Tetrahedron Letters</i> , 2000, 41(22):4353-4360.
	85	Peleman R.A., Kips J.C., Pauwels R.A. "Therapeutic activities of theophylline in chronic obstructive pulmonary disease." <i>Clin. Exp. Allergy</i> 1998 28 Supp 1. 3:53-56.
	86	Pfeffer et al. "Mice deficient for the 55kd tumor necrosis factor receptor are resistant to endotoxic shock, yet succumb to L. monocytogenes infection." <i>Cell</i> , 1993, 73:457-467.
	87	Piguet P.F. et al. "Expression and localization of tumor necrosis factor-alpha and its mRNA in idiopathic pulmonary fibrosis." <i>Am. J. Pathol.</i> 1993, 143:651-655.
	88	Piguet P.F., Vesin C. "Treatment by human recombinant soluble TNF receptor of pulmonary fibrosis induced by bleomycin or silica in mice." <i>Eur. Respir. J.</i> , 1994, 7:515-518.
	89	Reimund J. "In vitro effects of oxpentifylline on Inflammatory Cytokine Release in Patients with Inflammatory Bowel Disease." <i>Gut</i> 1997, 40:475-480.
V	90	Ross S., et al. "Suppression of TNF $\alpha$ Expression, Inhibition of TH1 Activity and Amelioration of Collagen-Induced Arthritis by Rolipram." <i>Journal of Immunology</i> , 1997, 159:6253-6259.

/PEZ/	91	Rutgeerts P. et al. "Efficacy and Safety of Retreatment with Anti-Tumor Necrosis Factor Antibody (Infliximab) to Maintain Remission in Crohn's Disease." <i>Gastroenterology</i> , 1999, 117:761-769.
	92	Sandborn W. and Hanauer S. "Antitumor Necrosis Factor Therapy for Inflammatory Bowel Disease; A review of Agents, Pharmacology, Clinical Results and Safety." <i>Inflammatory Bowel Diseases</i> 1999, 5(2):119-133.
	93	Saricaoglu H. et al. "Prevention of nickel-induced allergic contact reactions with pentoxifylline." <i>Contact Dermatis</i> 1998, 39(5):244-247.
	94	Sasayama S. et al. "New insights into the pathophysiological role for cytokines in heart failure." <i>Cardiovasc Res.</i> 1999, 42:557-564.
	95	Schmidt H. et al. "Thalidomide inhibits TNF response and increases survival following endotoxin injection in rats." <i>J. Surg. Res.</i> 1996 63(1):143-146.
	96	Schulz et al. "Synthese von 1,3a,3,12b-tetrahydro-dibenzo[b,f]-pyrazolo[3,4-d]azepin-Derivaten." <i>Z. Chem.</i> 1988, 28:181-182.
	97	Schweizer et al. "Combined automated writhing/motility test for testing analgesics." <i>Agents and Actions</i> , 1988, 23:29-31.
	98	Shih, Shin-Ru, et al. "Selective Human Enterovirus and Rhinovirus Inhibitors: An Overview of Capsid-Binding and Protease-Inhibiting Molecules." <i>Medicinal Research Reviews</i> , 2004, Vol. 24, No. 4, pgs. 449-474.
	99	Shire, MG and Muller GW. "TNF- $\alpha$ inhibitors and rheumatoid arthritis." <i>Exp. Opin. Ther. Patents.</i> 1998 8(5): 531-544.
	100	Smrz, R., et al. "Neurotropic and psychotropic agents. CIII. 2(8)-chloro-10(11)- (dimethylamino)dibenzo[b,f] thiepins as potential CNS agents; synthesis and pharmacological screening." <i>Chemopharma, Usti nad Labem, Czech. Collection of Czechoslovak Chemical Communications</i> , 1976, 41(11), 3420-3436.
	101	Stirling D. I. Semin. "Thalidomide and its impact in dermatology." <i>Cutan. Med. Surg.</i> 1998 17(4):231-242.
	102	Sun Exposure and Skin Cancer (online), (retrieved on 2008-09-08). Retrieved from the internet, URL; <a href="http://www.medicinenet.com/script/main/art.asp?li=USA&amp;articlekey=43077&amp;page=1">http://www.medicinenet.com/script/main/art.asp?li=USA&amp;articlekey=43077&amp;page=1</a> .
	103	Sun Exposure and Skin Cancer (online), (retrieved on 2008-09-08). Retrieved from the internet, URL; <a href="http://www.medicinenet.com/script/main/art.asp?li=USA&amp;articlekey=43077&amp;page=2">http://www.medicinenet.com/script/main/art.asp?li=USA&amp;articlekey=43077&amp;page=2</a> .
	104	Sykes A.P., et al. "The effect of an inhibitor of matrix metalloproteinases on colonic inflammation in a Erinitrobenzenesulphonic acid rat model of inflammatory bowel disease." <i>Aliment Phamacol Ther.</i> 1999, 13:1535-1542.
	105	Taylor R. Multiple Sclerosis: A Rehabilitative Approach, 1998, 9, 3, 525-536. "Immunologic Aspects of Multiple Sclerosis."
	106	Tochtermann et al. Ein neuer Zugang zu chiralen Tribenzocycloheptarien-(Tribenzo-[a.c.e]cyclohepten-) und Tribenzo[b.d.f]thiepin-S.S-dioxid-Derivaten." <i>Chem. Ber.</i> , 1968, 101:3122-3137.
	107	Tomizawa S. et al. "TNF inhibitory activity in the urine of chronic renal failure patients with glomerulonephritis." <i>Nephron.</i> 1993, 63:111-112.
	108	Tsuji et al. "Studies on Anti-Inflammatory Agents. VI. Synthesis and Pharmacological Properties of 2,3-Diarylthiophenes." <i>Chem. Pharm. Bull.</i> , 1998, 46(2):279-286.
	109	Ueda et al. "The Synthesis of 10-(4-Methylpiperazino)dibenzo[b,f]thiepin and Related Compunds. Neurotrpic and Psychotropic Agents." <i>Chem. Pharm. Bull.</i> , 1975, 23(10):2223-2231.
	110	Van Assche and Rutgeerts. "Anti-TNF agents in Chrohn's disease." <i>Exp. Opin. Invest. Drugs</i> , 2000, 9:103-111.
	111	van den Berg, W.B. "Anti-Cytokine Therapy in Chronic Destructive Arthritis." <i>Arthritis Res</i> 2001, 3:18-26.
	112	Vippagunta, S.R. et al. "Crystalline solids." <i>Advanced Drug Delivery Reviews</i> , 2001, 48(1):3-26.
	113	Viruses and Disease, Viral infections (online), (retrieved fon 2006-09-08), retrieved from the internet, URL; <a href="http://en.wikipedia.org/wiki/Viral_infections">http://en.wikipedia.org/wiki/Viral_infections</a> .
	114	Wermuth et al. "Molecular Variations Based on Isosteric Replacements." <i>Practice of Medicinal Chemistry</i> , 1996, pages 203-237.
	115	Westacott C.I. et al. "Tumor necrosis factor alpha can contribute to focal loss of cartilage in osteoarthritis." <i>Osteoarthritis Cartilage</i> 2000 8(3):213-221.
	116	Postmarketing Adverse Event Data for TNF-alpha Antagonists (October 23, 2001). Stephen A. Paget, MD < <a href="http://rheumatology.hss.edu/phys/specialreports/pagetttnf.asp">http://rheumatology.hss.edu/phys/specialreports/pagetttnf.asp</a> >
	117	Green (Using TNF alpha technology to treat rheumatoid arthritis) Article (July/August 2004). < <a href="http://rheumatology.hss.edu/phys/specialreports/pagetttnf.asp">http://rheumatology.hss.edu/phys/specialreports/pagetttnf.asp</a> >
	118	Centocor products (08/11/2004) < <a href="http://www.centocor.com/cgi-bin/site/products/prod_remicade.cgi">http://www.centocor.com/cgi-bin/site/products/prod_remicade.cgi</a> is cited for the statement that>
✓	119	"News & Notices: <a href="http://www.psoriasis.org/enbrel.approval.jan02.htm">http://www.psoriasis.org/enbrel.approval.jan02.htm</a> (7/30/2002).

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EXAMINER

/Paul Zarek/

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